

QUANTA

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Information on the Association

Membership of QUANTA, the independent QL user group, is by annual subscription. The Membership Secretary can supply full details. Copies of the association's constitution & annual accounts are available from the Secretary. There is an extensive software library. There are active national subgroups. Details are given in the Member's Guide and in this magazine.

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I hope you enjoyed July's weather. They say it was the warmest since 1914.

August too looks as though it may have good summery weather

THEN and NOW

In the 1950's I spent 5 very interesting and enjoyable years assessing the Water Balance of the River Lee (Essex and Hertfordshire). It has a catchment area of some 640 square miles

We measured precipitation, run-off, and water table. We also assessed evaporation.

Changes in the water table were measured at Royston Vicarage's deep well. This had records covering 300 years plus.

From some 30 rain gauge stations we prepared isohyetal maps, and hence calculated the monthly precipitation.

The run-off for the Lee and its 4 tributaries was derived from charts on clock driven recorders at 2 weirs, 2 flumes, and 2 stage discharge gauging stations. In addition at the stage discharge stations flows were measured once or twice a week by taking flow meter readings across the river cross section wading in thigh boots.

**COPY DATE for OCTOBER/NOVEMBER 2006 ISSUE
is:**

5TH OCTOBER 2006

Please ensure that your copy reaches the editor on or before that date. Copy on Paper or Magnetic Media or by Email.

All Contributions are Welcome.

Copy on Microdrive or Floppy Disk or CD to be accompanied by hard copy printout.

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Even with 3 of us to share the task it was quite a slog to reduce and collate all these observations by hand.

If it had been available the Sinclair QL microcomputer would have been more than capable. Unfortunately at that time , with very few exceptions, nobody knew that computers even existed.

Today the Meteorological Office could not operate without computers.

- x - x - x -

It is pleasing to learn that there will be a North American QL Show at Ontario on Saturday 30th September this year – details elsewhere in this magazine. Also that there will be a QUANTA Workshop at Byfleet on 5th November – details likewise elsewhere.

Please do your best to support them.

QUANTA COMMITTEE PRECIS

Sarah Gilpin

The committee has held two e-mail meetings since the publication of the last magazine.

Firstly we are delighted that Bill Cable has been able to organise a North American QL show in Niagara Falls, Ontario, Canada for September 30th 2006. The committee have offered support from Quanta to pay for the hire of the venue. We wish the show success and hope that it will be followed by the return of an annual North American show. Full details are available from bcable@coat.com

Secondly a date has been agreed for this years Byfleet show as 5th November 2006 starting at 10.00 am. This will be another joint venture by the Surrey Quanta Sub Group and the London QL and Quanta Group. Quanta committee have agreed to support the show in the usual manner. Anybody wanting further information should contact Ken Bain or Malcolm Cadman or visit www.sadeye.co.uk

One thing the QL did very well when it first appeared was to create excellent graphics, using a very compact and efficient library of drawing routines. But for the novice it was a bit of a headache, as there were so many different keywords to learn, each with many variants and most using different units:

ARC ARC_R AT BLOCK BORDER CIRCLE CIRCLE_R CSIZE
CURSOR_AC, DN CURSOR_X, Y, AC, DN ELLIPSE ELLIPSE_R
FILL FLASH INK LINE LINE_R MOVE PAN PAPER PENUP
PENDOWN POINT POINT_R RECOL SCALE SCROLL STRIP
TURN TURNT0. (And on QPC you have to include the WM_variants).

At that time, (1984), I needed graphics output for my Surveying job, so I passed a few nerve-wracking weeks in my spare-time trying to master all the units, and especially all the relative positions and dimensions of each keyword when added one to another. (When finally I had mastered these, the whole nightmare started again when I began Peeking and Poking graphics objects into RAM memory!)

So in January 1994, I thought it might be possible to reverse-engineer the keywords, and then to link their mathematical constructions in SuperBASIC to produce a QL Graphics Trainer, so anyone could see at a glance what needed to be done to access any point on the screen with any keyword. Basically, what I wrote was a front-end system which could be over-printed onto any window, allowing graphics to be drawn and then XOR-ed again to remove it, with a print-out of coordinates.

This is what this program does, although to make it short enough to type in I have removed most of the code, except for a random number generator which produces the demonstration. You will notice that I haven't included all the keywords, but only those which are usually interdependant. If you have youngsters who are interested in learning QL Graphics, this demo should help them to visualise the many stages involved in defining screen coordinates.

```
100::  
110 REMark GRAPHICS TRAINER_bas. by S. Poole v23jan94, v2july2006  
120 :  
130 REMark Mnemonics used to condense the Listing :  
140 REMark A_cross D_own V_ector M_essage$ A_spect_R_atio  
F_orcount  
150 REMark Ink Paper.. Wide High .. SKale YFactor Xfactor .. Negative  
160 CLEAR: c=1 :w=2 :b=3 :s=4 :o=5 :g=6 :t=7  
170 DATA 'CONsole','Window','Border','Scale','Origin','Graphics','Text_R'  
180 :  
190 REMark Initialise: constant_indexes, arrays & labels:
```

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```
200 OPEN#1,con_16: WINDOW 512,256,0,0: PAPER 2: INK 0: CLS
210 a=0: d=1: buf=128: DIM V(t,d),m$(t,buf),i$(buf)
220 ar=.74: RESTORE : FOR F=1 TO 7: READ m$(F)
230 :
240 REPeat loop
250 REMark Attribute Values to Graphics Command Parameters:
260 cW=512: cH=256: cA=0: cD=0: cB=1: cl=2
270 wW=RND(64 TO 448): wH=RND(64 TO 220): wA=32: wD=32
280 IF wW>wH: BW=wH/2: ELSE BW=wW/2
290 BW=(INT(BW)/2)-2: bD=RND(1 TO BW): bl=4: wP=2: wS=0: WT=50
300 SK=RND(10 TO 150): s2=SK/2: sX=-RND(s2): sY=-RND(s2)
310 nx=-sX: nY=-sY: r=2
320 L=SK: q=-L: GX=RND(q TO L): GY=RND(q TO L)
330 L=64: q=-L: TA=RND(q TO L): TD=RND(q TO L)
340 :
350 REMark Set-up a Graphics Display:
360 WINDOW cW,cH,cA,cD: BORDER cB,cl: PAPER wP: CLS: CSIZE
0,0
370 WINDOW wW,wH,wA,wD: BORDER bD,bl: PAPER wP: CLS
380 SCALE SK,sX,sY
390 LINE nY,0 TO sY,0, 0,nY TO 0,sY
410 CURSOR GX,GY,0,0 : PRINT m$(g)
420 CURSOR GX,GY,TA,TD: PRINT m$(t)
430 WINDOW cW,cH,cA,cD: BORDER 0: INK 0
440 SCALE cH,0,0: i$=INKEY$(#1,WT): OVER 1
450 :
460 REMark Conversion Factors to get pixel-offsets :
470 BA=bD*2: SD=wH-BA: Yf=SD/SK: Xf=Yf/ar
480 OA=sX*Xf: OD=sY*Yf: GA=GX*Xf: GD=GY*Yf
490 :
500 REMark Place pixel-vectors in a matrix of Offsets :
510 V(w,a)=V(c,d)+wA: V(w,d)=V(c,d)+wD
520 V(b,a)=V(w,a)+BA: V(b,d)=V(w,d)+bD
530 V(s,a)=V(b,a) : V(s,d)=V(b,d)+SD
540 V(o,a)=V(s,a)-OA: V(o,d)=V(s,d)+OD
550 V(g,a)=V(o,a)+GA: V(g,d)=V(o,d)-GD
560 V(t,a)=V(g,a)+TA: V(t,d)=V(g,d)+TD
570 :
580 REMark Get Pixels Across & Down, then convert to x and y:
590 REMark Link the OFFSETS & Label them:
600 FOR F=c TO t-1
610 fA=V(F,a): fd=V(F,d): Fx=ar*fA: Fy=cH-fd: fj=20
620 j=F+1: jA=V(j,a): jd=V(j,d): Jx=ar*jA: Jy=cH-jd
630 CIRCLE Fx,Fy,r: LINE TO Jx,Jy: CIRCLE_R 0,0,r
640 :
```

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```
650 IF fA>=0 AND fA<512-fj AND fd>=0 AND fd<256-fj THEN
660   CURSOR fA,fd: PRINT;m$(F)
670   ELSE CURSOR Fx,Fy,0,0: PRINT;m$(F)
680 END IF
690 :
700 IF jA>=0 AND jA<512-fj AND jd>=0 AND jd<256-fj THEN
710   CURSOR jA,jd: PRINT m$(j)
720   CURSOR Jx,Jy,0,0: REMark INPUT;i$
730   ELSE CURSOR Jx,Jy,0,0: PRINT;m$(j)
740 END IF : INK 0: i$=INKEY$(#1,WT)
750 END FOR F: i$=INKEY$(#1,4*WT)
760 END REPEAT loop
770 ::
End of Listing.
```

Birthday Pretties

Steve Poole

In 1988, Dr. Barry Martin of Aston University released a freeware fractal program so his students could earn some money. His idea was that students could take their computers to markets, input the birth dates of customers, and print out the graphics produced by the thereby individualised fractals program for a small fee. I don't know if anyone got rich from this! However, I had to completely rewrite the code to adapt it for the QL, only the mathematical component remaining similar.

My program adaptation develops the idea using entirely different input data ranges, showing the sort of thing you discover by doodling. I also experimented by outputting circles instead of points, Filling and Coring them and watching how the resulting patterns produced 'animations'. It took some considerable tweaking to get initial values that produced anything other than random-dot muses. Being fractal, the designs are semi-regular, which is artistically ideal for the production of interesting, balanced motifs.

In the next listing I will show you how I obtained suitable data values. Try experimenting using ellipses or Turtle Graphics etc in place of circles ...you may stumble on some unexpected visual effects!

The more you use SuperBASIC, the easier your programming will become, and the more the QL program library will increase. Apart from commercial programs, the QL community can only develop if its members discover new software ideas. This is why it is so important for members, especially younger ones, to experiment with other peoples programs.

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```
100 REMark Birthdays_bas, by S. Poole, overslept
110 REMark fractal maths by Dr. Barry Martin.
120 REMark RUN under DOS or EXEC under SIMS/E.
130 :
140 CLEAR: RESTORE : OPEN#1,con_16: WINDOW 512,256,0,0
150 INK 4: SCALE 128,-64*1.5,-64: OVER -1
160 :
170 FOR i=1 TO 6
180 READ a,b,c,rd's,exit,me$: x=0: y=0
190 CLS: AT 1,1: PRINT me$
200 :
210 FOR j=0 TO exit
220 z=y-((x>0)-(x<0))*(ABS(b*x-c))^.5: y=a-x: x=z
230 FILL 1: CIRCLE x,y,rd's: FILL 0
240 END FOR j: i$=INKEY$(#1,333)
250 END FOR i
260 i$=INKEY$(#1,-1): CLS: WINDOW 256,206,256,0: OVER 0
270 :
280 DATA 49, 8, 34, .3, 999, ' Typical Fractal Original'
290 DATA 20, 1, 60, 8, 100, ' Spliced Footballs'
300 DATA 7, 4, 56, 8, 400, ' Frothing up'
310 DATA 18, 1, 2, 40, 80, ' Thru the Canon-Bore'
320 DATA 31, 1, 5, 50, 25, ' Toyama twist'
330 DATA 30, 6, 94, 40, 250, ' Glass Faggot'
340 ::
```

End of Listing

We have a couple of small programmes by Steve Poole left for next issue. He has told me that he is running out of ready written items but hopes to begin writing again later in the summer. Thanks Steve for all your hard work [Ed]

The QL and the Genealogist

Sarah Gilpin

Part 2: Deciding on your ideal format

At the time we started to gather family information we did not have a PC, so we considered programmes for the QL. We found that Chris Boutel's G3 programme was a good tool for building the family tree, and gave each individual a unique identifying number. We also found that there were some anomalies within the programme that made recording things a bit more difficult, but we could get round most of them. There was a definite order as to how families had to be entered. First you had to enter the 'father', secondly the 'eldest child'

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and thirdly the 'mother', the programme then connected all three correctly and enabled the addition of the younger children. Entering 'father', then 'mother' and finally 'eldest child' connected father and mother as married, but removed mother's status when child was added. With the help of Rich Mellor of RWAP many of the anomalies that have been identified have been eradicated. We are now using G3 v. 3.22 successfully.

By the time we had entered all members of the trees combined for Good and Morice we had 16 generations, including my grandchildren. The first verified date we have is 1578, when Richard Good (2m) was made a Hanister of Oxford and therefore could trade as a master craftsman and train apprentices. Richard Good was a Master Chandler. When this tree was printed out (on the QL) it stretched over 30 feet and for some time was mounted on our front hall wall, stretching from the front door to the living room door. The information on the tree only gave name, year of birth and year of death for each individual. To me, a more serious shortcoming was the limited amount of information that could be entered in the 'notes' and 'events'. The number of letters is finite and frequently is too few to enter all the information available. It is at this point a decision is required as to whether your interest is just in names, dates of birth and death or whether you are interested in what the individual did and where they lived etc, Family History.

We wished to record a Family History rather than just the family tree. So we have made a Quill document for an individual's biography that is identified by the name and G3 number (i.e. Richard Good 2m) – this makes a convenient cross reference between G3 and the Quill document. We also generated an Archive database to list all the information regarding an individual's major events.

Where did we glean our information for the family tree? We were lucky in that an Uncle had drawn a detailed tree from information collected by my grandfather in 1880's while studying in Oxford. We also had the book written by my grandmother's cousin William Morice in 1923, which had a lot of interesting information and a number of family trees. As we were now dealing with two family names we created a Tree Name Menu in the QL that enables us to choose which family we were currently working on. This leads to a subsequent menu Morice (or Good) System Menu.

The menu reads as follows:

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<u>C</u> ompressor	(A.C.P. V3.3)
<u>F</u> amily Trees	(Genealogist V3.22)
<u>I</u> GI Converter	(Gedcom to Archive dbf)
<u>P</u> edigree	(LINEdesign v.)
<u>Q</u> PAC Exec	(Pointer Environment Routines)
<u>S</u> ources	(Research Source Information)
<u>T</u> ransfer dbfs	(Psion Exchange Archive v3.90L)
<u>W</u> ord Processor	(Psion Exchange Quill v3.90L)
<u>Z</u> 88 Transfer	

Return to Tree Name Menu

These menus have been programmed for Initial Letter Navigation, but could equally easily be programmed for the pointer environment. The family tree is stored under that heading.

We were given, during the early stages of our search for our ideal format, the programme Pedigree by LINEdesign with the suggestion that it is an alternative family tree builder to G3. Although it is in our menu we have not seriously considered it as a method of recording our family. Pedigree is one of an increasing number of programmes now available for the PC that builds your family backwards from YOU (i.e. YOU, 2 parents, 4 grandparents, 8 great-grandparents etc). This can be produced either as a tree or a fan. It is possible to cope with this format for a few generations, but it soon becomes unwieldy. By the eighth generation there are 256 names to fit around the edge of your tree or fan; by 16 generations (as in our tree) there would be over 32,000 if all names were known. We decided that this format would not suit us. Partly this was because we were working from 15/16 generations ago down to the current family and not backwards.

The format we finally settled on includes using Genealogist 3 to build the family tree with Quill for individual biographies and Archive to provide a database for an individual's basic information. At sometime in the future we shall have to convert all our information into a PC useable format if we are to make it available to others and to the One Name Society.

The next step is planning and carrying out your research and recording it with a cross reference to source, which will be in the next magazine.

SIDES is a new program from Dilwyn Jones allowing double sided printing. It lets you print on both sides of a paper printout by first printing the odd numbered pages of a text file or basic listing, then pausing to let you reload the paper and finally printing the even numbered pages.

Depending on how paper reloading works on your printer, the even numbered pages may be printed in normal (ascending), or in reversed (descending), page number order.

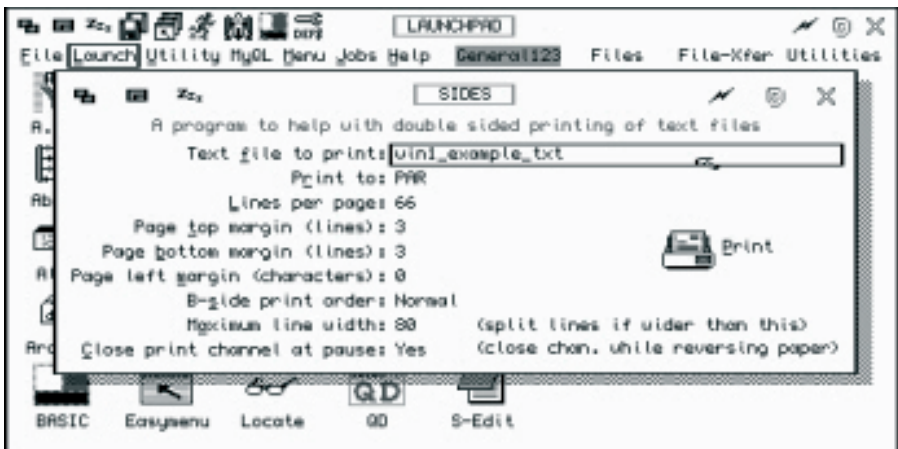
The program lets you specify top, bottom and left margin along with the number of lines per page.

For emulators such as QPC2 the program has the facility to close the printer channel during the paper reversal pause, to work around the problem that QPC2 printing does not start until the print channel is closed.

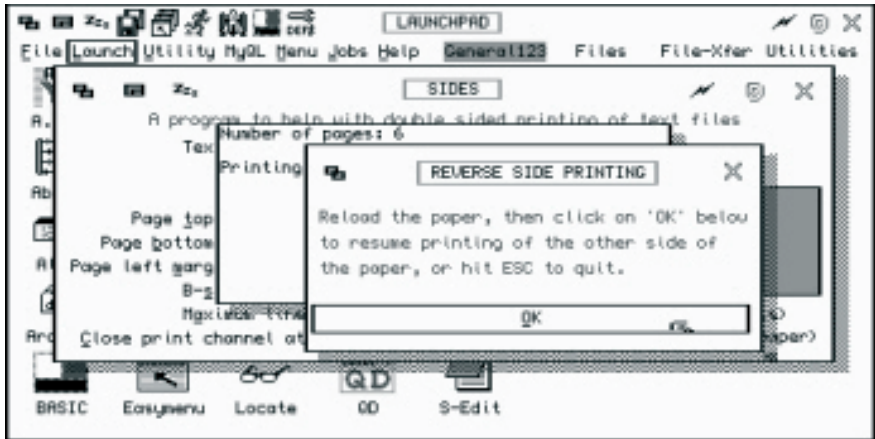
Sides is a program which needs Window Manager 2 and uses System Palette colours, so you either need a fairly recent SMSQ/E or a QDOS system with Pointer Environment version 2 or later. PE v2 is freely available from Wolfgang Lerner's SMSQ/E registrar web site, or from my own web site.

Sides is a Freeware program, available to download from

www.dilwyn.uk6.net/printing/index.html



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A couple of screen shots from Dilwyn's Programme "SIDES"

QUANTA NEWS

John Gilpin

Acknowledgement is made to ql-users list and to its contributors for the following news items.

BMP Programme:

At the beginning of August, Dilwyn Jones wrote to ql-users list:

I've put an alpha test release of my QL/Windows BMP graphics conversion and viewing program onto the Graphics page on my web site.

This is the first release version and no doubt subject to the usual bugs and problems of first releases.

The program lets you convert to and from 24-bit Windows BMP graphics files, and handles QL mode 4, mode 8, mode 16 (Aurora 256 colour), mode 32 (QPC2/QXL) and mode 33 (Q40/Q60) graphics files. BMP can also convert between the various QL modes. Where relevant, it can also convert Page Designer pages (e.g. transfer them to Windows BMP format).

File viewing is implemented across modes. For example, if you are using mode 32 on QPC, and wish to view mode 4, mode 8, mode 16 or mode 33 pictures, the program will attempt to convert and display in your current screen mode. Results vary - trying to view a 24-bit BMP or 16-bit GD2 image in mode 4 will inevitably give poor results.

The program needs expanded memory and a system with Window Manager 2 (either recent versions of SMSQ/E or QDOS with pointer environment version 2).

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This is a first release, so no doubt it will suffer from the usual bugs and weaknesses of first releases. Feedback is invited so that I may try to improve the program, as it is intended to be the front end viewer program for my wallpaper images CD/DVD which is ready once I'm happy with this program.

QL Today

Dilwyn was kind enough to forward the following news direct to our News Desk:

Gentlemen... a short piece of news about an index to a certain QL magazine.

QL TODAY INDEX

Thanks to Brian Kemmett, a complete index for QL Today magazine covering up to the end of volume 10 is now available in PDF format on the QL Today page on my web site:

<http://www.dilwyn.uk6.net/gen/qltoday/qltoday.html>

The existing separate indexes in plain text and doc file formats are still there of course.

Success 2

At the end of June, Bob Spelten sent us the following notes regarding version 2.04 of Success 2:

Success now at version 2.04.

Again the Eindhoven show in June was used to present my latest version for this DBAS front-end running under SMSQ/E 3.

Some work has been done to make it run under QDOS but I could not start up a reliable PE v2 system to test this. Maybe for the next version.

Most items now have a Hint window providing instant Help (thanks to Per Witte & QL Today).

You can skip the Read/Write question when opening a database by setting the default in Preferences but if needed you can also override this from the Commands menu.

For a new database you can read the field structure of an existing one and edit this.

Whole databases or single records can be merged if the field types match.

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E-mail: membership@quanta.org.uk

Next QUANTA Sponsored Events

North American QL Users Group
are holding

The North American QL Show

At

Super 8 Motel, Niagra Falls
(Canadian side)

Saturday September 30th. 2006

10.00 am to 4.00 pm

With a Group Dinner on the
previous evening at 6.00 pm.

Full details from bcable@coat.com

JORDY QUANTA SUB-GROUP AND LONDON QL AND QUANTA GROUP
PRESENT

BYFLEET '06 QUANTA WORKSHOP

ON **WEDNESDAY 5 NOVEMBER 2006**, FROM 10AM TO 4 PM

IN BYFLEET VILLAGE HALL, JORDY

(WWW.CADRE.CO.UK FOR LATEST INFO)

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A copy to the scrap or a file will no longer cut long fields at the column width like Print does.

01-01-2006, 1.1.2006 or 1/1/2006 are all acceptable as dates for conversion, also when copying a text field to a number field, '+12,34' or '-12.34' will both be made into a valid number but '123,456.78' will not.

User-defined searches are no longer limited to 100.

All matching record numbers of a Find/Replace action are stored in a list with the found field data (max. 60 chrs) for quick access.

You can open a database from a Read-Only medium if your system correctly identifies the RO medium. This was only the case on my QPC2 system. Both my QXL and Aurora/QuBide failed, leading to crashes of Success or even the system. So beware.

More details on bug fixes and other problems are in the Readme file. You can check out an English trial version from Wolfgang Uhlig's site <www.uhlich.nl/ql>, or obtain a full working copy (in English, German or Dutch) from Jochen Merz Software or Q Branch.

Bob Spelten jr <bsjr@chello.nl>

SUBGROUP MEETINGS

THE WEST MIDLANDS QL USER GROUP

This long-running group has moved back to its previous venue, the Queens Head pub in the City Centre. Meetings remain open to Quanta members and non-members alike. The Queens Head is in Steelhouse Lane, Central Birmingham, four minutes walk from Snow Hill main-line railway station and has ample street parking nearby.

Meetings are usually on the first and third Monday of each month (but not on Bank holidays unless the previous one was cancelled for that reason). After your first meeting you're expected to pay £1 each time towards the organisation and monthly newsletter costs - except once a year when the group pays all those who attend a pound instead (We provide food twice a year for those who attend the AGM and the group's birthday party) and at meetings we discuss all sorts of things, QL-related and otherwise, usually from about 8:20 pm onwards till 10:30 or later. The group owns QL hardware, a disk library and subscribes to relevant magazines. People can join the mailing list for £3.50 per year, even if they can't attend regularly.

The contact number remains Mike Bedford White's, on 0121 708 2560, anytime after 11 am.

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QUANTA DORSET SUBGROUP

Meetings are held, on the second Sunday of each month at the Merley Community Centre in Harrier Drive, Merley, just south of Wimborne Minster. Time: 2.00pm to 5.00pm. All are welcome.

John Meadows Tel: 01202 576189, or John Mason, 01425 275894.

EAST ANGLIAN QL USER GROUP

Meetings happen on the 1st and 3rd Sundays of the month at Bramerton Village Hall. Bramerton is just south of Norwich. They start at 1pm and end at 5pm. There is free parking on site, and tea/coffee is also provided free. If you can, please bring your QL system, all welcome.

Tarquin Mills <speccyverse@ntlworld.com> or Tel:01603-470399

LONDON QL AND QUANTA GROUP

Meetings are held in the School Room, which is the basement of the Borough Welsh Congregational Chapel, 90, Southwark Bridge Road, London SE1. This is almost opposite the junction with Marshalsea Road, at the other end of which, 5 minutes walk away, is the Borough Underground Station. Free parking is easily available in Southwark Bridge Road for road users, Cyclists are welcome.

Members currently each pay a subscription of £30 per year towards the cost of the hire of the hall and a small additional charge is made for tea/coffee - biscuits are then provided free.

Please bring your QL equipment if possible, all types welcome, e.g., PC portable running emulators. The Group has some systems stored at the venue for its use. In addition, there are lots of donated second user equipment, books, magazines, etc, available for purchase.

Time : 2.00pm to 6.00pm, on the second Sunday of the month.

No meetings are held in either December - winter break, or August - summer break. Giving 10 meetings a year.

Malcolm Cadman : Tel: 020 8691 5780; email: QL@mcad.demon.co.uk

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NEMQLUG - THE NORTH EAST MANCHESTER QL USER GROUP

Meetings are held at 181, Urmston Lane, Stretford, Manchester. M32 9EH (Near Junction 7 of M60 Motorway - Was Junction 7 M63 Motorway). Our informal meetings start at 7 p.m. and finish at 11 p.m. All welcome.

Meets on the last Thursday of each month (except December).

John/Sarah Gilpin 0161-865 2872 (gilpins@ic24.net)

or John/Alison Southern 01625-850067. (tarragon@bigfoot.com)

SCOTTISH QL USERS GROUP

SQLUG meets at George Gwilt's home every second Sunday in the month. Please contact George Gwilt before coming to get the location.

Geogwilt@aol.com

SOLENT SUBGROUP

Meets at Botley Market Hall, all welcome. Park at the back and use side entrance.

1st Saturday of the month from 2.00 pm to 6.00 pm.

Graham Evans, Tel: 023 8040 3350.

SURREY QUANTA SUBGROUP (SQSG)

Venue is St Giles Church Hall, Ashted. (This is the other side, towards the downs, of the main Epsom - Leatherhead road, up Park Lane which is at the Epsom end of the town).

From 8.00 to 10.30 pm on the last Wednesday of each month, except December.

Ken Bain 01932 347 432 (to midnight), kenb@bcs.org.uk

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SUSSEX QL USER GROUP

Currently without a meeting place, anyone interested should contact Keith Mitchell or Roy Wood.

Roy Wood, 01273 386030 or Keith Mitchell, 01903 742263.

QUANTA SALES & WANTED

John Gilpin

NOT FOR SALE:

Due to extremely high demand for our Microdrives advertised in the last issue of QUANTA Magazine, we regret that we are now out of stock and we have a list of potential customers waiting for any further Microdrives which we might obtain. If you would like to add your name to that list, please let me know.

SMALL Ads.

FOR SALE:

Q60 computer with 128 Mb RAM, 20 Gb HD, CD & FD drives, 2 PAR, 4 SER, mouse and keyboard.

SMSQ, Linux and software package installed.

Cost £669; Best Offer secures, but buyer who can collect from London area preferred

Email: david_mccann@tiscali.co.uk, Phone 0208-994 8103.

WANTED:

Di-Ren Micro Process Controller

Contact: John Gregory, email jmelgregory@tiscali.co.uk

Phone: 01763 260120

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FORTHCOMING QUANTA WORKSHOPS

NORTH AMERICAN QL SHOW SATURDAY SEPTEMBER 30th 2006.

The North American QL Show will be held on September 30th. in Niagara Falls, Ontario, Canada. We will meet in the lobby of the Super 8 Motel for a group dinner at a nearby restaurant at 6 pm Friday September 29th. The Show will be in the Super 8 Motel conference room from 10 am till 4 pm on Saturday. A simple free lunch will be provided during the show.

The foliage will be starting to change in late September so there will be lots of colors to enjoy in addition to Niagara Falls and casinos which are within walking distance of the motel. Visitors from distant places can fly into Toronto or Montreal and stay within Canada the whole time if they wish. They can also fly into many US cities. The Canadian \$ is currently about .9 US \$.

So far Jim Hunkins, Roy Woods, Tony Firshman, Al and Dorothy Boehm, Bill Cable and Mary Boyle are planning to attend. Jim will give a live QDT demo and Roy will show off the latest QPC and Tony will fix whatever is broken. Please spread the word.

Location of Motel where show will be held:

SUPER 8 MOTEL - NIAGARA FALLS - Canadian side QEW to Hwy 420 *
5706 Ferry St, Niagara Falls, ON L2G 1S7, CA
Phone: 888-442-6095 * Fax: 905-356-7760 *
email: 3386@hotel.cendant.com Web: <http://www.super8.com/Super8/control/>

The price of a room with 2 double beds for Friday Sep 29th will be \$80 and Saturday night \$116. When reserving specify that you are with the QL Computer Club and eligible for the General Managers Discount. There is wireless Internet at the motel. Check in time is 1pm. Prices in Canadian \$
Some distances from Niagara Falls, Ontario to various cities:
Toronto, ON 80 miles 128 km Montreal, QC 400 miles 640 km
Boston, MA 470 miles 752 km NYC, NY 410 miles 656 km
Buffalo, NY 23 miles 37 km

The contact person if there are any questions or you need any help.

Bill Cable
510 St Gaudens Road Tel:1-603-675-2218
Cornish, NH 03745 USA

cable@cyberportal.net or bcable@coat.com

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And if your budget won't stretch to a trip to Canada
Why not visit what will probably be the last Quanta QL show of 2006

**SURREY QUANTA SUB-GROUP AND LONDON QL AND QUANTA GROUP
PRESENT**

BYFLEET '06 QUANTA WORKSHOP

**ON SUNDAY 5 NOVEMBER 2006, FROM 10AM TO 4 PM
IN BYFLEET VILLAGE HALL, SURREY**

(WWW.SADEYE.CO.UK FOR LATEST INFO)

**Again London Group and Surrey Group are combining their annual shows,
into Byfleet '06.**

Byfleet is just inside M25, between jns 10 & 11, and the Hall is just South of A245.

From M25, jn11; go East towards Weybridge, then turn right (South) onto A318 and follow it to Brooklands (now a business park), then through the old racetrack, turning right onto A245. Turn left at second roundabout, left at little roundabout, and Hall is on right.

From M25, jn10; take A3 towards London, left onto A245 towards Woking at next junction, (Painshill). After A318 joins, turn left at second roundabout - see above. (Or you can take the earlier left fork into Byfleet, go right at first small roundabout and left at the next, by the green.)

From A3, either direction; leave at Painshill junction with A245 Cobham/Woking – head for Woking.

By train; Byfleet & New Haw is on the Waterloo Woking line. It's 12 to 15 mins walk. Don't go through Brooklands - carry on down the old road, across the A245, and on to the green, then turn right.

Free Parking, and all the usual attractions. If that isn't enough, Brooklands Museum (aircraft and motor racing) is just up the B374: or there's a Bus Collection on the A245 to Cobham: or the RHS Gardens at Wisley (RHS Membership needed on Sundays).

Up-to-date information with a link to more maps, is on www.sadeye.co.uk.
Or call Malcolm Cadman, 020 8691 5780, ql@mcad.demon.co.uk
or Ken Bain, 01932 347 432 (to 1am), kenbbb@ntlworld.com, Skype donkenb.

Part 1:

The following article is reproduced by kind permission of the author and The Scottish QL Users Group (SQLUG) in whose July Newsletter it was first published [Ed]

INTRODUCTION

The programs T_CONFIG_DATA and T_CONFIG_LOAD provide a way of adding config blocks to S*BASIC programs compiled with TURBO. T_CONFIG_DATA produced two files, one ending in _DTA and the second in _INS. The first is a set of DATA lines to be added to the S*BASIC program and the second is the config block itself. The second file has to be inserted into the compiled version of the program. This is done by T_CONFIG_DATA.

The need to insert the config block after compilation by TURBO, though not too difficult, can be annoying if there are many changes being made to a program requiring many compilations. Thus, the recent change to TURBO allowing the inclusion of the config blocks during compilation should prove useful and welcome.

The major part of the change to TURBO is in Codegen_task, the program which takes the intermediate code produced by Parser_task and makes up the object code. It is changes to this program that I describe below.

CODEGEN_TASK

A programmer can now cause inclusion of a config block by treating it as if it were a set of extensions. Thus, if the config block produced by T_CONFIG_DATA were in the file "win1_gally_Ins" it could be included in the S*BASIC program by adding to the program the line:

```
100 REMark %%win1_gally_Ins,1,0
```

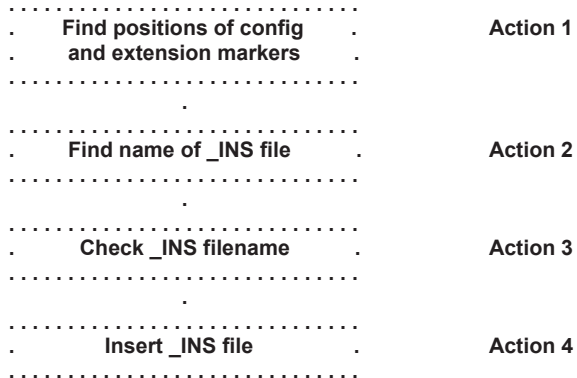
Parser_task will treat this in a similar way to any extension file to be included in the compiled program. However, in this case Parser_task will notice that phoney parameters 1 and 0 follow the filename and will arrange to include the filename itself and not the file, as would be the case with a true extension. Parser_task will also test that the file can indeed be opened for reading and, if this is the case, will send a note to Codegen_task that it should expect an _INS file to be included as a config block.

In case anyone is wondering why the parameters 1 and 0 must be phoney I should remind them that the first parameter is the offset from the start of the extension program to code which has to be run before the extensions are loaded. In a real extension file this offset is normally zero but if not it must be an even number, since code cannot start at an odd address. The second parameter is the offset to the start of the definitions of the extra keywords. This cannot be zero since the first bytes of the program must be executable instructions.

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Just before Codegen_task releases the compiled program on an unsuspecting public it checks to see if there is a message from Parser_task indicating that an _INS file is to be expected. If so it starts to act.

There are four actions taken by Codegen if it is told that an _INS file is present. These actions are shown in the following flowchart.



To perform these actions Codegen needs storage space. Happily there is a block of 256 zero bytes at a place called “zeroes”. This was used during the first part of the program, but by the time of insertion of a config block it is no longer needed. This space is used as shown here.

zeroes	Position for config block (A)	4 bytes
zeroes+4	Start of inclusions (B)	4 bytes
zeroes+8	Address of space for _INS file	4 bytes
zeroes+12	ID of _INS file	4 bytes
zeroes+16	Space for 64 byte header	64 bytes
zeroes+82	Copy of 10 byte _INS name	10 bytes
zeroes+92	Filename of _INS file	< 43 bytes
Zeroes+140	Restricted name	<11 bytes

Now the four actions are described.

Action 1.

Codegen knows that there should be both a place reserved for the config block and also a set of inclusions one of which contains the name of the _INS file somewhere in the code it has just produced. Where are they?

The Space for the config block is heralded by the characters “\$’#” and the list of inclusions follows the characters “((TZ>>”

The first Action must thus be to look for these markers. This is done by setting “states”. The first state, indicated by 0, is that neither marker has been found. The second state, indicated by 1, is that the first marker is found but not the second. The

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third state is therefore that the second marker but not the first is found. This is signalled by -1.

Since Parser_task has indicated the presence of an _INS file it follows that there is also at least one inclusion so both positions should be found. These are stored at zeroes and zeroes+4.

Action 2.

To find the name of the _INS file Codegen searches through the object code from B's position. Each inclusion starts with a long word giving the relative position of the next inclusion, or a word of -1 to signal the end of the inclusions. Codegen finds the inclusion which has a first parameter of 1. This parameter is the word immediately following the pointer to the next file.

The inclusion when found is just the name of the _INS file.

Action 3.

The place in the object code where the config block is to be set starts with a 10-byte entry which has to be consistent with the name of the _INS file. For Codegen to accept the _INS file its name, stripped of _INS and any bytes before, and including, the previous underscore and truncated to ten bytes if necessary must equal that 10-byte entry.

For example, if the entry is

"Pulley "

The filename

"Win1_exe_PULLEY_INS"

would be accepted.

Action 4.

The final action consists in allocating space equal to the _INS file size, loading the file into that space and sending the contents to the object code at the appropriate position.

The code for these four actions is now shown. In this code use is made of eleven different entries to the operating system. Short notes about these are given after the code.

The remaining part of this article will be reproduced in the next Quanta Magazine issue. [Ed].

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